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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,101	10/09/2003	Laurent Dumortier	0540-1016	8126
466	7590	03/08/2006	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			GUIDOTTI, LAURA COLE	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/681,101	DUMORTIER ET AL.	
	Examiner	Art Unit	
	Laura C. Guidotti	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06 January 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because in Figure 2A is the element shown as "14-1" as "a strip" or did the Applicant intend "14-1" to actually be "14-4" (a plug). It appears that the element represented in Figure 2A is meant to be labeled "14-4". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 3-7 are objected to because of the following informalities: In the preliminary amendment of 09 October 2003, the Applicant has modified claim 5 to

Art Unit: 1744

eliminate issues of multiple dependency, however the Applicant has failed to state a particular claim that claim 5 depends from. The Examiner has treated claim 5 as depending from claim 4. Appropriate correction is required.

Claim 3 recites the limitation "the motor" in Line 2 and "the pneumatic type" in Lines 2-3. There is insufficient antecedent basis for these limitations in the claim.

Claim 4 recites the limitation "the mandrel" in Line 3. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, it is unclear as to what angle the bevel must be. The Applicant states, "...the head is beveled and has an angle of 30 degrees, 45 degrees, or sixty degrees, preferably thirty degrees." It is unclear as to what range of angles are claimed.

Claim 9 recites "Container comprising at least a device...with a stock of tools, suitable flexible tubing...a housing for adjustment of the air pressure delivered..." however it is unclear as to how a container comprises a device, etc. There is not any structure that defines a container. Furthermore, if claim 9 (and 10) is meant to be depending from claim 1, the preamble of the claim must be consistent with the preamble of all of the other claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinhart, USPN 4,858,264.

Reinhart discloses the claimed invention including a device that comprises “means” for causing vibratory alternating movement (via a transducer 106, 406, or 602 causing reciprocal motion at an ultrasonic frequency; Column 6 Lines 8-10) and a tool secured to these means (110, 204, 304, 404, or 604; see Figures). The body includes a motor (transducer 106, 406 or 602) and a mandrel (unlabeled, see Figures 4 and 6).

5. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Topiarz, DE 19949071 (see also English translation of Abstract).

Topiarz discloses the claimed invention including a tool comprising means for causing vibratory alternating movement (the vibrator unit, 9) and a tool secured to the vibrator unit (5). The means for causing vibratory alternating movement comprises a body (the vibrator unit has a housing, see Figure 1) including a motor (7) and a mandrel (it appears to be at or near “4” as shown in Drawing Detail 2). The tool appears to include a shaft (upper rear portion of “5”) adapted to be mounted in the mandrel (see Figures) and a head (lower front portion of “5”) capable of being in contact with a surface to be cleaned (see Figure 1).

Art Unit: 1744

6. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sandt et al., USPN 4,137,588.

Sandt et al. disclose the claimed invention including a tool comprising means for causing vibratory alternating movement (gear train driven by a motor, causes vibratory movement in an oscillatory manner, Column 4 Lines 6-41) and a tool secured to means (any one of the tools as shown in Figures 5-10). The means that cause the vibratory movement comprise a body (6) including a motor (14) and a mandrel (19 or 20) adapted to receive the tool (via tongues 21 or pins 27; Column 3 Lines 27-31). The device has tools that comprise shafts (33) that are mountable in the mandrel (Figures 3-4; Column 3 Lines 33-48) and heads (36, 37, 38, 42, 44, 47, or 50) that are capable of being in contact with a surface to be cleaned. The device includes a container (1) to store interchangeable tools (Column 2 Lines 44-47).

7. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawai et al., USPN 5,287,582.

Kawai et al. disclose the claimed invention including a tool comprising means for causing vibratory alternating movement (a cam 4, Column 2 Lines 61-68) and a tool secured to these means (2). The vibratory alternating movement includes a body (or housing as it is housed in the operating rod, 1) including a motor (7; Column 2 Lines 34-40) and a mandrel (10) adapted to receive the tool (see Figure 2).

8. Claims 1, 2, 4, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pierce et al., USPN 5,353,465.

Art Unit: 1744

Pierce et al. disclose the claimed invention including a tool comprising means for causing vibratory alternating movement (continuous spurts of compressed air and drive shaft 16; Column 3 Line 55 to Column 4 Line 7) and a tool secured to these means (50). The vibratory alternating movement includes a body (or housing as it is housed in the operating rod, 12, 15) including a pneumatic motor (Column 3 Lines 1-3) and a mandrel (57) adapted to receive the tool (see Figure 2). The tool has a shaft (58) adapted to be mounted in the mandrel (see Figure 4) and a head (54) provided to be in contact with the surface that is to be cleaned. Also, the head is beveled (at 54, see Figure 2) at an angle of approximately 30-45 degrees (as shown in Figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 1744

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al., USPN 5,353,465.

Pierce et al. disclose all elements above, however do not disclose a specific operating frequency, particularly that the pneumatic motor has a vibratory frequency of 120 Hz.

It would have been obvious for one of ordinary skill in the art to provide the scraping device of Pierce et al. with an operating frequency of 120 Hz so that the reciprocating vibrating motion is continuous and successful at removing debris and further it would have been obvious to use 120 Hz since applicant has not disclosed an advantage, is used for a particular purpose, or solves a stated problem. Therefore, one would have expected Pierce et al. to perform equally well at 120Hz.

10. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandt et al., USPN 4,137,588 in view of Sexton, USPN 5,314,512.

Sandt et al. disclose all elements above, however do not disclose that the head is made of polyetheretherketone. Sandt does include a tool head that has an abrasive material (Column 3 Lines 51-54).

Sexton discloses an abrasive tool head that is comprised of an abrasive material that contains polyetheretherketone (Column 3 Lines 3-6) that is loaded with carbon for increased strength (Column 3 Lines 26-29) or 30% (or up to 40%) glass fibers (Column 3 Lines 34-40).

It would have been obvious for one of ordinary skill in the art to modify the abrasive cleaning head of Sandt et al. to be comprised of a polyetheretherketone that is loaded with carbon or glass fibers, as Sexton teaches, so that the abrasive head will have increased strength and abrasive properties.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al., USPN 5,353,465 and Sandt et al., USPN 4,137,588.

Pierce et al. and Sandt et al. disclose all elements above. Pierce et al. further includes flexible tubing (24) and a housing (22), however does not include a container with a stock of tools.

It would have been obvious for one of ordinary skill in the art to modify the device of Pierce et al. to further include a container with a stock of tools, as Sandt et al. teach, so that the device of Pierce is conveniently stored and replacement tools are stored there as well.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al., USPN 5,353,465 and Sandt et al., USPN 4,137,588 as applied to claim 9, in view of Topiarz, DE 19949071 (see also English translation of Abstract).

Pierce et al., Sandt et al., and Topiarz disclose all elements above. Topiarz further includes a suction system with a venturi connected to an air source (14).

Art Unit: 1744

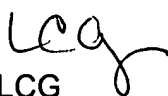
It would have been obvious for the system in a container of Pierce et al. and Sandt et al. to further include a suction system having a venturi, as Topiarz teaches, so that excess debris or particulate is removed.


Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LCG


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PRIMARY EXAMINER